

## Abstract

In a modular data acquisition system (4), a module comprises at least one analog-to-digital converter (12) for converting an analog input signal (IN1, IN2, IN3, IN4) into a digital signal (OUT1, OUT2, OUT3, OUT4),  
 5 and a clock generating circuit (20) for supplying an internal clock signal (209). The module further comprises a connector for plugging in a removable connecting element (3) on the front side of the module (1) in order to connect it to a synchronization bus connecting several modules in said system.

10 A clock selecting circuit (204) enables the selection of either a slave-clock status, wherein the converters (12) are synchronized by an external synchronization signal supplied by said synchronization bus, or of a master-clock status, wherein the converters are synchronized by said internal clock signal which is also used as an external synchronization signal on  
 15 said synchronization bus. Trigger signals can also be transmitted by the synchronization bus and by the connecting elements.

(Fig. 1)